

PATENT ABSTRACTS OF JAPAN

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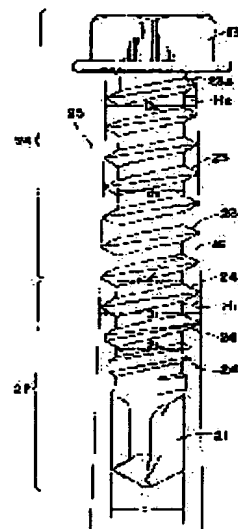
(72)Inventor : SHINJO KATSUMI

(54) COMPOSITE SCREW

(57)Abstract:

PURPOSE: To reduce screwing resistance and aim at smooth tightening by providing a height of a screw thread of a tightening screw portion slightly smaller than that of a tapping screw portion having the largest outer diameter, and forming core diameters of both portions almost the same.

CONSTITUTION: A height H2 of a screw thread 23a of a tightening screw portion 23 is provided slightly smaller than a height H1 of a screw thread 24a of a tapping screw portion 24 having the largest outer diameter D1, and becomes gradually smaller as it approaches a head portion 13, thus forming a taper ending at the height H2 of a screw thread 23b having the smallest outer diameter D2. A core diameter d2 of the tightening screw portion 23 is substantially the same as a core diameter d1 of the tapping screw portion 24. Therefore, adaptable engagement can be realized in the tightening screw portion 23 with respect to a female screw by means of the tapping screw portion 24, thus reducing screwing resistance and smoothly realizing tightening force as required.



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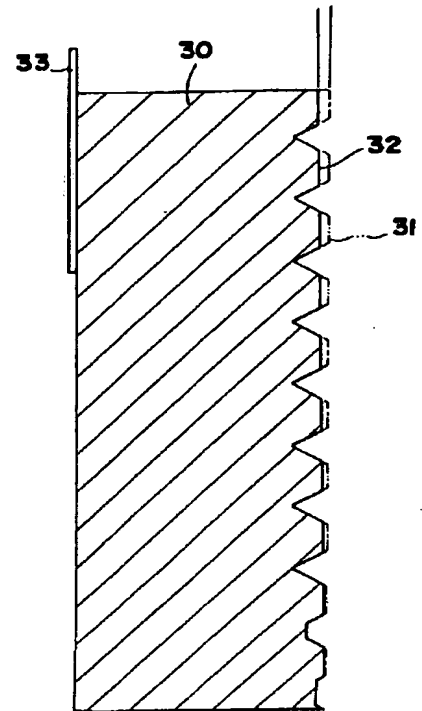
FIG.6

合ドリルねじの正面図、第6図はねじ転造ダイスの
縦断面図、第7図ないし第10図は本発明の複
合ドリルねじによる締結順序を示す説明図である。

- | | |
|----------------|--------------|
| 11...第1シャンク | 12...第2シャンク |
| 13...頭部 | 14...平坦面 |
| 15...溶接突起 | 16...破断部 |
| 21...ドリル部 | 23...締結ねじ部 |
| 23a, 23b...ねじ山 | |
| 24...タッピンねじ部 | 24a...ねじ山 |
| 25...複合ドリルねじ | 26...締結部分 |
| 27...ねじ立て部分 | 30...ねじ転造ダイス |
| 32...傾斜面 | |

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- | | |
|----------------|--------------|
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| 23a, 23b...ねじ山 | |
| 24...タッピンねじ部 | 24a...ねじ山 |
| 25...複合ドリルねじ | 26...締結部分 |
| 27...ねじ立て部分 | 30...ねじ転造ダイス |
| 32...傾斜面 | |

FIG.1

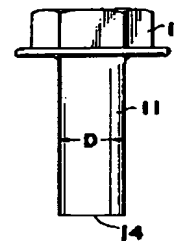


FIG.2

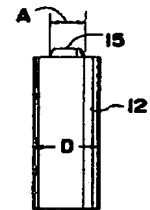


FIG.3

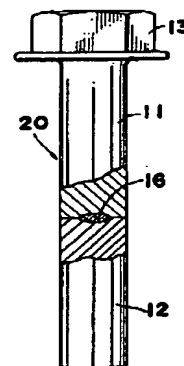


FIG.4

